



Student Performance Q&A: 2010 AP® Microeconomics Free-Response Questions

The following comments on the 2010 free-response questions for AP® Microeconomics were written by the Chief Reader, David A. Anderson of Centre College in Danville, Ky. They give an overview of each free-response question and of how students performed on the question, including typical student errors. General comments regarding the skills and content that students frequently have the most problems with are included. Some suggestions for improving student performance in these areas are also provided. Teachers are encouraged to attend a College Board workshop to learn strategies for improving student performance in specific areas.

Question 1

What was the intent of this question?

This question tested students' ability to draw and work with a model of perfect competition. Part (a) asked students to draw the graphs for a competitive market and a representative firm. Part (b) assessed students' understanding of the elasticity of demand for a competitive firm. Part (c) asked students to follow the repercussions of an increase in demand. Part (d) tested for an understanding of how product markets with common inputs affect each other.

How well did students perform on this question?

The mean score for this question was 6.02, more than 60 percent of the maximum possible score of 10 points. Students did well drawing the market graph, finding the firm's quantity, and shifting the market demand curve. Students did not do well explaining the elasticity of the firm's demand curve or comparing average total cost with price after the increase in demand.

What were common student errors or omissions?

It was common for students to omit explanations that perfectly competitive firms are price takers or that they can sell all that they want at the market price. There were also many erroneous or incomplete explanations for the link between demand for corn in the ethanol market and price and quantity in the cereal market.

Based on your experience of student responses at the AP Reading, what message would you like to send to teachers that might help them to improve the performance of their students on the exam?

Emphasis on drawing graphs neatly and accurately is paying off in terms of improved scores on problems such as this. Teachers should stress the importance of specific, correct labels on all lines and axes. Also many points were missed due to inadequate explanations. Students should focus on

clearly and completely explaining the concepts or relationships required, without too much superfluous information. It is critical to explain every step in a chain of events between cause and effect, but it was surprisingly common for long answers to fail to answer the question.

Question 2

What was the intent of this question?

This question assessed students' proficiency with a factor-market model. Part (a) asked students to draw the graphs for a factor market and a representative buyer. Part (b) tested for familiarity with the concepts of marginal product and marginal revenue product. Part (c) assessed students' understanding of the conditions for the cost-minimizing combination of inputs.

How well did students perform on this question?

The mean score for this question was 1.60, which is 32 percent of the maximum possible score of 5 points. Students did well at calculating the hourly rental price that equated the marginal product per dollar spent on each input and thereby satisfied the conditions for the cost-minimizing combination of inputs. Students had difficulty drawing the side-by-side graphs for the factor market and the representative buyer.

What were common student errors or omissions?

Many students made errors when drawing the factor supply curve for the John Lamb Company. Students also had difficulty identifying the equilibrium rental quantity of machines for the John Lamb Company.

Based on your experience of student responses at the AP Reading, what message would you like to send to teachers that might help them to improve the performance of their students on the exam?

Factor markets are similar enough to product markets that they do not require a lot of time to teach, but it is important for teachers to emphasize the ways in which factor markets differ from product markets. Explanations of marginal revenue product, derived demand, and the horizontal factor supply curve that individual firms face are central to these differences.

Question 3

What was the intent of this question?

This question assessed students' understanding of consumer surplus, producer surplus, socially optimal output, and deadweight loss in a product market with negative externalities.

How well did students perform on this question?

The mean score for this question was 2.30, which is 46 percent of the maximum possible score of 5 points. Students did well identifying consumer and producer surplus but had difficulty understanding the lack of deadweight loss in this context.

What were common student errors or omissions?

Less than half of the students could identify the socially optimal quantity of output. The same is true for the consumer surplus after the tax was imposed, although most could identify consumer surplus before the tax. Very few students answered the deadweight loss question correctly.

Based on your experience of student responses at the AP Reading, what message would you like to send to teachers that might help them to improve the performance of their students on the exam?

There are clearly learning opportunities in the area of markets with externalities. Students did well on the early parts of the question but were thrown off by the negative externality. Because most production involves externalities, there are myriad examples with which to explain social optimality, surplus, and deadweight loss in this context. After the explanation of a product market, teachers can add, “Now what if the flowers provide a positive externality for passersby?” or “What if the widgets are made using energy from fossil fuels?” and then go into possible solutions and their effect on prices, quantities, surplus, and deadweight loss.